REPUBLIC OF GHANA

What works? What fails?

FINDINGS FROM THE NAVRONGO COMMUNITY HEALTH AND FAMILY PLANNING PROJECT

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Child survival: What worked and what failed?

The goal of "Health for All by the Year 2000" has not been achieved in rural Africa. At the end of the millennium, infant mortality remained above 100 deaths per thousand live births in the sub-Saharan region (United Nations 1998). Fully two-thirds of all deaths among children under 5 years, and half of the years of life lost in the region, are attributable to measles, malaria, diarrhoeal diseases, and acute respiratory infections, often acting in synergy with malnutrition. Low-cost and effective preventive measures and treatments for averting the major direct causes of child morbidity and mortality have been available for more than three decades, yet the implementation of effective programmes for delivering these technologies remains an elusive goal. International interest in establishing health for all has led to regional health agendas, such as the UNICEF-sponsored "Bamako Initiative," which promotes the idea that managing health care resources and providing revolving funds for primary health care drugs and services through community volunteers can be a sustainable means of achieving Health for All. Other approaches have emphasized the need for placing paid paramedics in communities.

Though paved with good intentions the road to Bamako is full of twists and turns

To this day, debate persists about the relative effectiveness of volunteer versus paramedic-provided care. Paramedics are widely viewed as an effective approach to reducing mortality, but the feasibility and sustainability of posting paramedics to communities is often questioned, with the volunteer approach advocated as a low-cost and sustainable alternative. The Community Health and Family Planning (CHFP) project responded to this debate by testing the relative effectiveness of these strategies for achieving Health for All. In keeping with the spirit of Health for All, facilities, staff, and medical supplies utilised in the experiment are resources routinely available throughout the region and all study areas of the district have the same density of health care providers per population, the same level of training, and the same medical supplies. The experiment tests the effectiveness of alternative strategies for utilising these resources at the community level.

The zurugelu intervention involves mobilizing traditional social institutions in health delivery and planning, as called for by the "Bamako Initiative." Village health committees, termed *Yezura Nakwa* (YN), were established in collaboration with chiefs, elders, and other community opinion leaders. The YN oversees a cadre of volunteers called *Yezura Zenna* (YZ), or health volunteers, who form the backbone of the zurugelu approach. The main purpose of the YZ is to sell the CHFP idea to community members, particularly men who exert considerable influence over decisions about women's mobility to seek health care. YZ receive two weeks of initial training and quarterly refresher training. They visit households to talk about hygiene, child immunization, and other health issues, and to make it known that they are available for basic treatment and referrals. They have significant health resources at their disposal, including Paracetamol for febrile illnesses, chloroquine for malaria, Aludrox for abdominal pains, and multivitamins, but they do not have antibiotics or vaccines. Instead, they provide referrals to the clinics and help organize immunization campaigns. Another important element of the zurugelu intervention is the *durbar*, or community gathering, which is traditionally used by chiefs to mobilize community action on some issue of common concern. Durbars provide an effective means of communicating project messages to communities, establish the credibility of the project, and build community support for project activities.

A health service mobilisation intervention tests the effectiveness of improving access to 16 Community Health Officers (CHO) by reassigning them from sub-district clinics to community-constructed residences, known as Community Health Compounds (CHC) and equipping them to conduct door-to-door health services. CHO are trained for two years, paid a monthly salary, and provide a wider range of health intervention options than YZ.

In the combined intervention area, the zurugelu and CHO approaches are pursued simultaneously. This intervention tests the hypothesis that the zurugelu and MOH mobilization interventions are complementary and synergistic, combining the implicit accountability and sustainability of the former with the relative advantages of professionalism in the latter. In the combined treatment area, close collaborative links have been established between the YZ and the CHO.

Results have been analysed separately for ages ranging from infancy (0-11 months) to early childhood (12-23 months), to late childhood (24-59 months)—adjusting for possible differences in risk by sex of the child; mother's age, education, and residence in the compound; the number of residents in the compound; and distance from the compound to the nearest health facility and to Navrongo Town. Findings are, as follows:

- Infants exposed to CHO services have 12 percent lower mortality than those not exposed, although this effect largely disappears when statistical procedures adjust for maternal and child characteristics. The impact of the CHFP on infant mortality is evident, but not pronounced.
- Exposure to the zurugelu/"Bamako" strategy is associated with an *increase* in the odds of early childhood mortality by nearly two-fold.
- In late childhood (24-59 months), exposure to two years or more of the CHO service activity is associated with nearly a 60 percent *decrease* in mortality among children exposed for two years or more to project interventions. Throughout childhood, the child survival difference between communities exposed to zurugelu and CHO-only approaches is huge; CHO far outweigh the effect of the volunteer.
- The combined cell of the experiment has no apparent effect on late childhood mortality, possibly because CHO effects are offset by the detrimental YZ effect.

Health volunteers' crucial role as social mobilisers should be tapped for CHPS

The impact of placing a CHO in a community, without zurugelu activities, is greater than expected. This finding strongly supports the CHPS policy of building CHC, posting CHO to communities, and mobilizing communities to support their service delivery work. The CHFP results clearly show that doorstep and community CHO services represent an important step toward achieving Health for All.

The zurugelu result is unexpected and calls for further investigation and action. One possible explanation for the increased mortality is that mothers in the zurugelu cell may be using the more accessible and less expensive but less well-trained services of the YZ in situations where they might otherwise take their children to the sub-district clinic or to the CHO. Careful investigation of this hypothesis has demonstrated, however, that YZ are trained to refer, and are not treating febrile children. Only a small proportion of all health care in YZ work areas is actually provided by volunteers. Therefore, volunteers are not introducing health risks. But, it is also apparent that YZ lack the credibility that parents seek in pursuing health care options. Nurses in the community substitute for traditional healers, accelerating the introduction of effective health technology when it is needed. But YZ do not affect the traditional pattern of health-seeking behaviour, so that a sick child experiences delays that arise from parental consultation with healers. Results show that this pattern of interaction fails to address the needs of children; whereas nurse provided care has major health benefits. Findings therefore attest to the need for caution with introducing the CHPS volunteer strategy. Utilizing volunteers as health mobilisers is more appropriate than utilizing them as health service providers.

Send questions or comments to: What works? What fails?
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